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(54) FOIL FOR DETERMINING PRESSURE ZONES IN TEETH

(71) I, GERD HANEL, a citizen of the Federal Republic of Germany, of 607 Langen, Farnweg 11, Germany, do hereby declare the invention, for which I pray that a patent may be granted to me, and the method by which it is to be performed, to be particularly described in and by the following statement:—

The invention relates to a dental foil to determine the pressure zones (interferences) in grown or artificial or partly artificial teeth of human beings receiving dental treatment.

Articulation papers are known which mark varying biting forces by different quantitive colour emissions by means of progressive shades of colour. Slight pressure points are indicated by a light colour, whilst severe pressure points are shown in a dark colour. The more or less intensive colouring of the points of occlusion clearly reveal where parts of the teeth have to be ground to a greater or lesser extent. Proceeding from this, the invention provides a dental foil for determining the zones of pressure (zones of interference) in grown or artificial teeth, said foil consisting of a polyester film which has a thickness of between 0.004 and 0.012 mm coated with a coloured skin comprising a wax binding agent and a colouring material, the coloured skin being thinner than the polyester film, and the colouring material being a titanium dioxide pigment, or a fluorescent colouring substance. The polyester film preferably has a thickness of about 0.008 mm.

Such a foil, as provided by the invention, does not split. Nor does it crease. During testing, the coloured skin is removed completely but in an extremely fine manner, that is to say it is lifted from the polyester film, so that the pressure points are marked as light-transparent points which do not permanently deform the film. Accordingly the polyester film is marked by points, but it is not squashed and deformed. From the coloured skin, coloured zones are lifted and are deposited on the teeth as deep but clearly defined colours, so that the dentist finds distinctly readable interference illustrations.

The polyester film is extremely expansible. In this way, an extremely tight closing position of the teeth is achieved, due to the micro-thin material, without compressing the material before this position is reached and thereby causing smudging effects in the area of the points of contact and interference.

Moreover, due to its special expansibility, the material is in a position to adapt itself, for example to the contour of ground facings with extreme accuracy.

Furthermore, the test foil has the advantage that the coloured substance can be applied on the plastic material as a dry bond. This contributes to avoiding smudging effects also in special cases.

The test foil also provides the advantageous possibility of producing a progressive colour effect, in that the colour effect of the points of contact and interference depends on the extent to which the expression of the foil is set against these points. For instance, points on which a high force of pressure acts are coloured more intensely than those which are subjected to a less strong pressure.

An exemplified embodiment of the object of the invention is shown diagrammatically, on an enlarged scale, in the drawings, in which

Fig. 1 shows, in a lateral view, respectively a tooth of the upper jaw and the lower jaw, and

Fig. 2 shows a tooth in a plan view.

A tooth 1 of an upper jaw, which is not shown, is in the closing position with a tooth 2 of a lower jaw, which is also not shown (Fig. 1). Between both teeth 1, 2 there is placed a strip of micro-thin articulation or occlusion foil 5, 6 which is coated with a

colouring substance, in the present case on both sides, and which marks in colour the points of contact 4 of the two teeth.

Such points of contact 4 are shown in Fig. 2 on the chewing surface 3 of the tooth 2. The coloured marking is exactly confined to the size of a point of contact or interference.

WHAT WE CLAIM IS:—

1. A dental foil for determining the zones of pressure (zones of interference) in grown or artificial teeth, said foil consisting of a polyester film which has a thickness of between 0.004 and 0.012 mm coated with a coloured skin comprising a wax binding agent and a colouring material, the coloured skin being thinner than the polyester film, and the colouring material being a titanium dioxide pigment or a fluorescent colouring substance.

2. A foil for determining the zones of pressure in grown or artificial teeth, substantially as hereinbefore described, with reference to and as illustrated in the accompanying drawings.

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1477107 COMPLETE SPECIFICATION

1 SHEET *This drawing is a reproduction of the Original on a reduced scale*

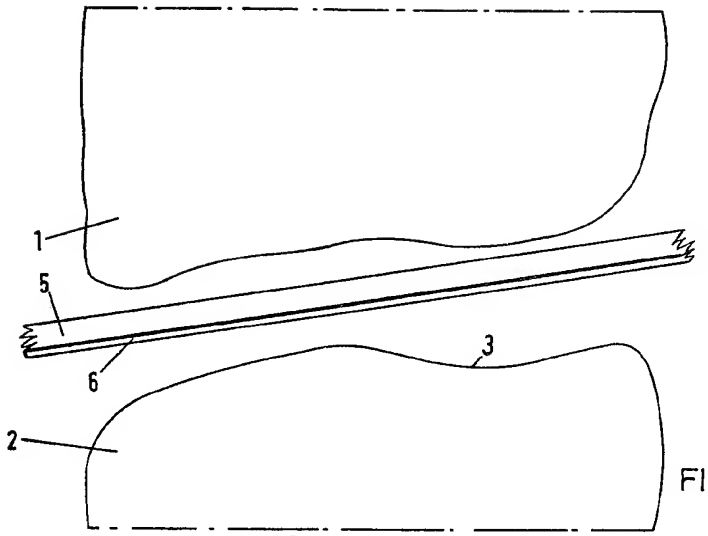

FIG.1

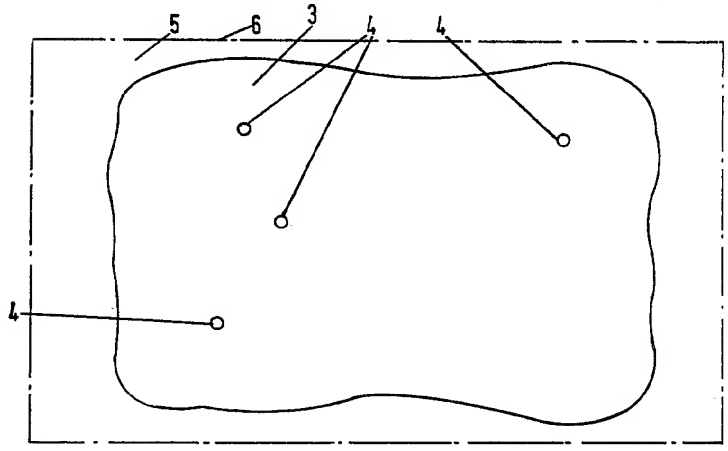

FIG.2